

Appln No. 10/542,392
Amdt date May 24, 2010
Reply to Office action of February 23, 2010

REMARKS/ARGUMENTS

Interviews

As a preliminary matter, Applicants thank the Examiners for taking the time to conduct telephone interviews with Applicants' representative on Thursday, April 29, 2010 and Tuesday, May 18, 2010. During the interview on April 29, 2010, the non-porous hydrophilic film of Tonkin et al. (U.S. 6,615,537) and the fertilizer and porous film of Wright (EP 0 268 556) were discussed in view of the instant application. The Examiners agreed that the present application and file wrapper, including the data submitted with a Declaration under 1.132, would be reviewed and a subsequent discussion would follow. During the interview of May 18, 2010, the possibility of amending independent claims 1 and 7 to add clarifying language encompassing the growth effect from the fertilizer in combination with the non-porous hydrophilic film was discussed. With respect to the recitation of JIS in claim 5, the Examiners suggested submission of the supporting accreditation documents along with a response.

Response to Final Rejection

With this amendment, claims 1-8 and 10-13 are pending. Claims 1 and 7 are amended to provide clarifying language. The amendments are supported by the specification and drawings as originally filed, and, *inter alia*, at page 7, lines 5-37 through page 8, lines 1-9; page 21, lines 11-36; and, in Example 12.

In the February 23, 2010 Office Action, claim 5 is rejected under 35 U.S.C. 112, second paragraph, as allegedly indefinite for containing the abbreviation JIS L1092. In Applicants' response to a previous Office Action, JIS was defined as Japanese Industrial Standard. Documentation with respect to JIS accreditation is enclosed with this response. Applicants respectfully request reconsideration of this rejection in view of the enclosed JIS documentation. Applicants submit that JIS standards are analogous to ASTM standards, which are recited in the claims of at least the following U.S. patents issued on May 18, 2010: 7,718,741, 7,718,733, 7,718,727, 7,718,721, 7,718,118, 7,718,049, 7,717,999, and 7,717,975.

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Claims 1-4, 7, 8, and 10-13 are rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Tonkin et al. in view of Wright. Applicants respectfully traverse this rejection.

As discussed in both interviews, Tonkin et al. disclose a non-porous hydrophilic film (membrane) in combination with water wherein the source and quality of water "**is not important**" because only the water vapor (i.e., no suspended or dissolved matters) will pass through the membrane (col. 6, lines 14-30). Wright discloses a membrane having "pores" to pass water and its nutrients (col. 6, lines 18-27)(See also the explanation on the "pervaporation" nature of the non-porous hydrophilic film at col. 1, line 59- col. 2, line 7, and col. 4, lines 5-28, indicating that any chemical and microbiological impurities cannot pass through the film.) At pages 2-3 of the action, the Examiner asserts that "it would have been obvious to one of ordinary skill in the art at the time of the invention to add fertilizer to the water of Tonkin as taught by Wright as to provide a nutrient rich medium to plants." Applicants disagree with this reasoning.

As discussed at length in the present application and in the prosecution of this application, Tonkin et al., at col. 6, lines 14-30, explicitly teach that only water vapor (i.e. no suspended or dissolved matters) passes through the non-porous hydrophilic membrane; therefore, the skilled person would not assume that fertilizer in the water as taught by Wright (which was expected to pass through Wright's porous membrane) would pass through the non-porous membrane of Tonkin et al. In view of the disclosure of Tonkin et al, there is no motivation to add fertilizer to the water if only water passes through the membrane. Tonkin et al. teach that the quality of water "**is not important**", and as such, *teach away* from adding a fertilizer to it. The presently claimed invention discloses an *unexpected* and *advantageous result* with respect to the effect of fertilizer in the water in combination with a non-porous hydrophilic membrane.

At the bottom of page 7 to the top of page 8 of the instant specification, the inventors postulate as to how this result occurs. However, Applicants submit that, regardless of how the aqueous fertilizer solution confers its unexpected effect through the non-porous hydrophilic membrane, it does occur, and is shown to occur throughout the present specification (e.g. in the Examples) as filed. The presently claimed system, having a non-porous hydrophilic film and

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aqueous fertilizer solution was not previously disclosed by, suggested by, or obvious in view of the prior art.

Applicants respectfully remind the Examiner of in *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985): the Federal Circuit's instructive comments, "The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time." Likewise, in *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992), the Federal Circuit admonished against the use of hindsight reconstruction of an invention in the manner reflected by the present rejections. According to the Federal Circuit:

[I]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. ... This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.'

In order to expedite prosecution of this application, Applicants have amended independent claims 1 and 7, as shown herein, to now recite language to clarify the result obtained from the instant plant-cultivating system and plant-cultivating method. Amended claim 1 now recites in part, "*said aqueous fertilizer solution affecting the growth of the plant;*" and amended claim 7 now recites in part, "*allowing the aqueous fertilizer solution to affect the plant growth through the non-porous hydrophilic film*". In view of the telephonic discussions and the remarks put forth above, as well as the clarifying amendments made herein, Applicants submit that independent claims 1 and 7, and claims depending therefrom, including claims 2-4, 8, and 10-13, are patentable over Tonkin et al. in view of Wright. In addition, the dependent claims include other limitations, which together with their base claim and any intervening claims, further patentably distinguish them over these references.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Mori et al. (EP 1 203 525) in view of Wright. Applicants respectfully traverse the rejection.

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Like Tonkin et al., Mori et al. also disclose a non-porous hydrophilic film (selective moisture vapor-permeable portion). At page 5 of the action, the Examiner asserts that "it would have been obvious to one of ordinary skill in the art at the time of the invention to add fertilizer to the water of Mori as taught by Wright as to provide a nutrient rich medium to the plants." Applicants disagree with this reasoning, for much the same reason as discussed above in regards to Tonkin et al., and for the following additional reasons.

Mori et al., at paragraphs 0073-0074, teach a "water impermeable," selective moisture vapor-permeable portion wherein an antibacterial agent can be added to the water because it "will not pass through the selective moisture vapor-permeable portion according to the present invention." Mori et al. further teach that "it is possible to use any kind of water (such as seawater, hard water, soft water, and polluted water)," indicating that even metal ions or chloride ions cannot pass through the vapor permeable portion. The skilled person considering Mori et al. would reason that the fertilizer of Wright would not have an effect on the plant, because Mori et al. teach that agents (e.g. antibacterial agents) in the water will not pass through the selective moisture vapor-permeable portion (paragraph 0073). Accordingly, there is no motivation to add the fertilizer of Wright to a plant system using a non-porous hydrophilic membrane of Mori et al. In fact, Mori et al. appear to *teach away* from adding anything to the water to affect the plant because Mori et al. explicitly teach that it will not affect the plant. As such, independent claim 1, and all claims depending therefrom, including claims 5 and 6, are patentable over Mori et al. in view of Wright.

Conclusion

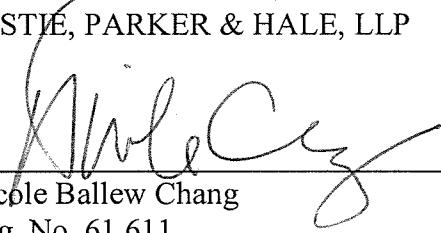
In view of the above amendments and remarks, Applicants submit that all of the pending claims 1-8 and 10-13 are in condition for allowance. Applicants respectfully request reconsideration and a timely indication of allowance. If there are any remaining issues that can

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be addressed by telephone, Applicants invite the Examiner to contact Applicants' counsel at the number indicated below.

Respectfully submitted,

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626/795-9900

NBC/nbc

Enclosure: Information regarding Japanese Industrial Standards (JIS)

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About the JISC

(1) Outline

JISC is the abbreviation for the Japanese Industrial Standards Committee, which was established within the Ministry of Economy, Trade and Industry to conduct surveys and deliberations on industrial standardization based on the Industrial Standardization Act. Specifically, the JISC is set up to conduct deliberations on the adoption and revision of JIS, and to submit reports based on recommendations to related ministers and conduct consultations therewith with regard to the promotion of industrial standardization, as aspects of which include industrial standards, JIS Mark Certification System, and the Japan National Laboratory Accreditation System. The JISC also participates in international standard development activities as Japan's sole representative body in the ISO and the IEC.



(2) Organization

The JISC consists of a "Council" as well as a "Standards Board" and "Conformity Assessment Board" established thereunder. The Council designs and plans fundamental matters concerning the operation of the JISC, and the Boards have technological committees which conduct deliberations on JIS, etc. Furthermore, under the Council, the "Special Committees" have been established for the purpose of conducting surveys and deliberations on specific matters. The details of the organization are as follows.

(Council)

The Council consists of members (the number of members is limited to under 30, and stood at 26 as of April 1, 2006), and determines the JISC's comprehensive policies as its highest decision-making body by holding well-rounded discussions on the concept of standardization policies, based on its industrial policies, technological policies, and trade policies, etc. The Council also compiles "Regulations for the operation of the JISC," which concretely stipulate deliberation procedures at the JISC, so as to formulate rules governing the operation of various committees established under the JISC banner in an effective manner. Within the framework of the JISC, the "Standards Board" and the "Conformity Assessment Board" have been established under the auspices of the Council, and under the two aforementioned boards, technical committees are established to conduct deliberations on respective sectors. Furthermore, the Special Committee on Consumer Policy and the Special Committee on Measurement Standards and Intellectual Infrastructure exist for the purpose of conducting surveys and deliberations on specified matters. The Chair of the Council is Mr. Tadashi Okamura (Chair of the Board of Directors, Toshiba Corporation), and the Vice Chair is Prof. Eisuke Masada, (Professor of the Faculty of Science and Technology, Tokyo University of Science).

List of members of the Council (As of April 1, 2007)

Name	Title
Katsuji Akita	President, Railway Technical Research Institute
Masaaki Adachi	Senior Vice President, Japan Electrical Manufacturers' Association
Yoshinori Iizuka	Professor, Department of Chemical System Engineering, School of Engineering, The University of Tokyo

List of members of the Council (As of April 1, 2007)

Name	Title
Kazunori Ishiguro	Professor, Faculty of Law and Graduate Schools for Law and Politics, The University of Tokyo
Nobuo Okubo	Chairman of the Society of Automotive Engineers of Japan
Tadashi Okamura	Chair of the Board of Directors, Toshiba Corporation
Marino Osami	Advisor, Japan Consumers' Association
Hiroshi Kimura	Chairman of the Committee for Standardization Center, Japan Iron and Steel Federation
Kazuo Kyuma	Chairman of the Standardization and Safety Group, Japan Electronics and Information Technology Industries Association
Shigetada Komori	Vice Chairman, Japan Chemical Industry Association
Hiroshi Shima	President of the Japanese Standards Association
Chika Sekine	President, Universal Design Institute for Information Technology (UDIT)
Masami Tanaka	Director, Japan Testing Center for Construction Materials
Setsuko Tanahashi	Representative of the Board of Directors, Nippon Association of Consumer Specialists
Keiko Chino	Member of the editorial board, Tokyo Head Office, The Yomiuri Shimbun
Kazuko Teramoto	Professor, Toyohashi Sozo University Junior College
Akira Nagashima	Executive Director, Yokohama National University
Masahiro Nishijima	Director General, National Institute of Health Science
Yoshimasa Nihei	Director, Research Institute for Science and Technology, Tokyo University of Science
Hisako Fukumasu	Director of Apparel Department, Japan Housewives' Association
Yuko Maeda	Director & Associate Professor, Intellectual Property Div. Technology Licensing Organization, TOKYO MEDICAL and DENTAL UNIVERSITY
Eisuke Masada	Professor Emeritus, University of Tokyo
Tsuneo Matsumoto	Professor, Graduate School of Law, Hitotsubashi University
Kimiko Murofushi	Professor, Faculty of Science, Ochanomizu University
Tomonari Yashiro	Professor, Institute of Industrial Science, The University of Tokyo

(Standards Board)

As standardization has become more and more important as a tool to strengthen Japan's industrial competitiveness, the Standards Board has established policies with the aim of promoting "standardization, R&D, and acquisition of intellectual properties in a unified manner," "strategic international standardization so as to disseminate Japan's industrial technology throughout the global market," and standardization with full consideration of the aged and the disabled, and environment-friendly standardization, and has conducted deliberations to combine these policies with concrete activities in formulating standards. The board has also worked on methods for promoting JIS systems, which are de jure standards (standards adopted based on official procedures such as JIS or international standards), considering the moves and divisional of roles of the de facto standards (standards and specifications created by voluntary participation of interested parties, such as Forum Standards and Consortium Standards). These are reflected in action plans to promote international standardization and environmental JIS, and will eventually lead to the adoption and revision of JIS. Furthermore, responding to the demand for faster adoption of standards, especially in rapidly advancing sectors, the board is planning to initiate the "Competent Standardization Body System," aiming for faster adoption of JIS through the utilization of private sector's capabilities to create standards, and the "TS/TR System" to disclose cases as TS/TR which are not yet ready for adoption of JIS and to facilitate their expedient adoption thereof.

These results are to be reflected in activities of the 26 "Technical Committees" established for respective technological sectors under the Standards Board, and activities of the "Technical Committee on Environment and Recycling Policy" established as a committee for the purpose of dealing with matters in a cross-sectoral manner.

In addition to these committees, the "Committee on International Affairs" and the "Committee on National Standards and Conformity Assessment Systems" have been established under both boards (the "Standards Board" and the "Conformity Assessment Board") so as to conduct surveys and deliberations on cross-sectoral themes. Both committees conduct cross-sectoral deliberations on the strengthening of international standardization activities and the promotion of the inclusion of JIS specification within mandatory legislation.

[<List of members of the Standards Board>](#)

(Conformity Assessment Board)

The Conformity Assessment Board conducts examinations on the operation and development of the JIS Conformity Assessment Systems (including the designation of JIS Mark items), conformity assessments (including reference materials), and surveys and deliberations on management system standards. At the same time, the board reviews operational concepts and the development of domestic certification/accreditation system and the international/regional systems of conformity assessments from the viewpoint of disseminating these standards.

In addition to the "Committee on National Standards and Conformity Assessment Systems," which the Conformity Assessment Board established jointly with the Standards Board, there exist the "Committee on JIS Marking" which examines the JIS Mark Certification System, and the "Committee on Management System Standards" which examines measures necessary for the dissemination and development of a certification/accreditation system that uses appropriate management system standards based on market needs. The Conformity Assessment Board has worked to change the JIS Mark Certification System, which originally served as the governmental certification system, to a private certification system, as well as to review the Japan National Laboratory Accreditation System (JNLA), and has discussed the ideal accreditation system (a universally-accepted "One Accreditation Accepted Everywhere" accreditation system). [<List of members of the Conformity Assessment Board>](#)

(Special Committee on Measurement Standards and Intellectual Infrastructure)

Japan falls behind the U.S. and European countries in terms of the development of measurement standards, measurement/assessment methods, and databases. The Special Committee on Measurement Standards and Intellectual Infrastructure establishes plans necessary for the development of these sectors and assesses the implementation thereof, as well as the accelerated and effective development of intellectual infrastructure, such as research materials. This Special Committee was established as a joint committee in coordination with the Industrial Science Technology Policy Committee of the Industrial Structure Council, and is now reviewing matters such as the supply system for reference materials.

[<List of members of the Special Committee on Measurement Standards and Intellectual Infrastructure>](#)

(Special Committee on Consumer Policy)

The Special Committee on Consumer Policy conducts necessary surveys and deliberations for the purpose of further reflecting the viewpoints of consumers (overall consumers without any

imbalance in terms of age or gender and with full consideration given to the viewpoints of the aged and the disabled) into the process of developing standards such as JIS. The committee also functions as a domestic review committee for the COPOLCO, established within the ISO. [List of members of the Special Committee on Consumer Policy](#)

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